

# LAB 3

## First Program

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### GOALS:

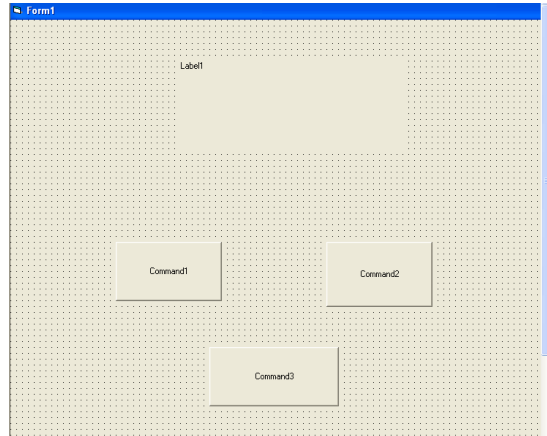
1. Students will be able to create a program that outputs “Hello World”.
2. Students will be able to stop a program by using the **UnLoad** statement.

### ESSENTIAL QUESTIONS

1. What are the purposes of the button Display?
2. What are two ways to stop a program?

### PART 1:

**Step 1:** Create the following form below with the following objects (Label, 3 Buttons):



**Step 2:** name all of the objects to the following

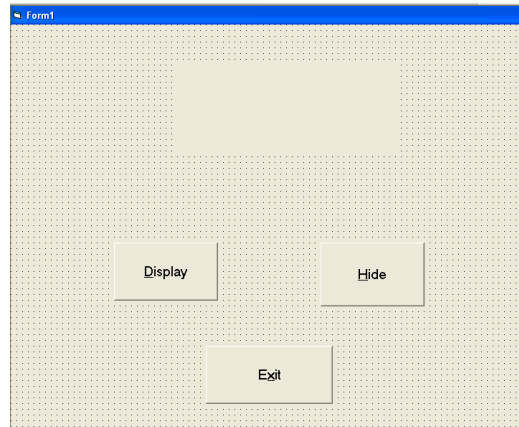
Form → frmLab3  
Label1 → lblDisplay  
Command1 → cmdDisplay  
Command2 → cmdHide  
Command3 → cmdExit

**\*\*\* Note: When you start programming please use the following steps: \*\*\*\*\***

- A. Create your form with all objects
- B. Name all your objects with appropriate names using the 3 letter prefix for each object.
- C. Change all the captions

You will notice by naming all your objects has no effect to the design view. Naming your objects now lets you refer to each object by its name.

**Step 3:** Change the caption of your objects to the following. To change the caption of all your objects, you must select the object and go to the property window and select the caption property.



lblDisplay is Blank  
 cmdDisplay caption is "&Display"  
 cmdHide caption is "&Hide"  
 cmdExit caption is "E&xit"

**Step 4:** Change all buttons caption to Font size 14 by using the Font property of each button.

**Step 5:** Change the lblDisplay Font Size to 18.

Now that you have named all the objects and set the properties, it is time to program.

**Step 6:** Double click the Display button. By double clicking, it will take you to the programming area and automatically type the procedure's heading for the display button. All the code for the Display button occurs between the Sub and End Sub statement. Type the following:

### Option Explicit

```
Private Sub cmdDisplay_Click()  

    lblDisplay.Caption = "Hello World"  

End Sub
```

You should notice a drop down box appears after you type in the dot of lblDisplay. This drop down list gives you a list of all the properties of the label lblDisplay that you have access to. Select the caption property.

**Step 7:** Type the following code for the Hide button. Make sure you double click the Hide button or select it from the list in the coding section. Type the following:

```
Private Sub cmdHide_Click()  

    lblDisplay.Caption = ""  

End Sub
```

**Step 8:** Type the following code for the Exit button.

```
Private Sub cmdExit_Click()  

    Unload frmLab3  

End Sub
```

**Step 9:** Run the program by clicking the blue arrow icon or select the Run from the menu and select run from the list.

\*\*\*Note: When you run the program, the user **interface** appears. The **user interface** is the screen where the user can click, select, enter data and do other things from.

**Congratulations!!!! You are a programmer.**

**Program code** – is the instructions that tell objects of a program how to behave.

### **Code Break Down:**

By using the “&” symbol for captions, it allows to create shortcut keys. By pressing the ALT key plus the letter that is underline, it will open the object instead of using the mouse.

The **Option Explicit** statement should be type in at the beginning. Its main purpose is to find errors before you run your program. Example misspelled word. You can have Option Explicit automatically appear by going to the menu and *selecting Tools then Options then make sure the editor tab is selected and check the Require Variable Declaration box.*

### **lblDisplay.Caption = "Hello World"**

This statement changes the label property at run time when someone clicks on cmdDisplay button. Properties can be set at the beginning before run time and we can change properties at run time as well.

The **dot** is called the **dot operator** and allows us access to all the properties of the object that it follows. In this case, the dot operator gives us access to the caption property of the label lblDisplay. The equal (=) symbol allows us to change the property from blank to “Hello World”. “Hello World” will be displayed when someone clicks the Display button or press alt-D.

### **lblDisplay.Caption = ""**

This statement is an easy way to clear a label. This is used a lot when a program is being used over and over and allows the programmer to clear labels and start fresh for the next run. This statement is usually found in TextBox. So when you type a value in the TextBox, it will clear the label.

### **Unload frmLab3**

The UnLoad statement is a way to stop a program. You must use the form name or you can substitute the word “Me” instead of the form name.

TRY IT:

Substitute the word “Me” instead of the form name “frmLab3”. Run the program.

**Did it work?**

### **Experiment**

Practice with the properties of each object on the screen to see what can be done. There is no way we can cover each object’s properties.

Try changing the Font of the objects

Try changing the Background Color of each object including the form

Try the visible property of the objects

**Questions:**

1. What was the purpose of the “&” symbol when used in a caption?
2. What is an easy way to clear a label? Give an example.
3. When does the code of a button runs?